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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/035,736	11/07/2001	Thomas W. Smith	D/A1442	5048

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EXAMINER
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SHOSHO, CALLIE E

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 02/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/035,736

Applicant(s)

SMITH ET AL.

Examiner

Callie E. Shosho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27, 29, 30, 35-36, 38-39, 44 is/are rejected.
- 7) ☒ Claim(s) 28,31-34,37 and 40-43 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/8/03
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. All outstanding rejection except for those described below are overcome by applicants' amendment filed 11/25/03.

The new grounds of rejection as set forth below are necessitated by applicants' amendment and thus, the following action is final.

**Claim Rejections - 35 USC § 103**

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-27, 30, 36, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gundlach et al. (U.S. 6,054,505) in view of Vieira et al. (U.S. 5,096,781).

The rejection is adequately set forth in paragraph 3 of the office action mailed 8/26/03 and is incorporated here by reference.

4. Claims 1-26, 29, 35, 38, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gundlach et al. (U.S. 6,054,505) in view of WO 97/20000.

The rejection is adequately set forth in paragraph 4 of the office action mailed 8/26/03 and is incorporated here by reference.

**Response to Arguments**

5. Applicants' arguments regarding JP 50121178 have been fully considered but they are rendered moot in view of the discontinuation of this reference against the present claims.

6. Applicants' arguments filed 11/25/03 have been fully considered but, with the exception of arguments relating to JP 50121178, they are not persuasive.

Specifically, applicants argue that:

(a) there is no motivation to combine Gundlach et al. with either Vieira et al. or WO 97/20000 given that there is no disclosure in Gundlach et al. of quaternary ammonium substituted UV absorbing compound and no disclosure in either Vieira et al. or WO 97/20000 of using quaternary ammonium substituted UV absorbing compound and anionic dye in ink that contains polyquaternary amine compound.

(b) The only motivation to combine Gundlach et al. with either Vieira et al. or WO 97/20000 is based on hindsight.

(c) The examiner is applying an obvious to try standard when combining Gundlach et al. with either Vieira et al. or WO 97/20000.

With respect to argument (a), it is agreed that there is no disclosure in Gundlach et al. of quaternary ammonium substituted UV absorbing compound which is why Gundlach et al. is used in combination with either Vieira et al. or WO 97/20000.

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Gundlach et al. disclose ink comprising water, non-polymeric salt, anionic dye, and polyquaternary amine. However, there is no disclosure of quaternary ammonium substituted UV absorbing compound.

Vieira et al. disclose ink jet ink comprising anionic dye and light stabilizer that is identical to quaternary ammonium substituted UV absorbing compound presently claimed. Vieira et al. disclose such stabilizers containing at least one quaternary ammonium group are effective light stabilizers and particularly suitable for ink jet inks (col.2, lines 11-15).

It is agreed that there is no disclosure in Vieira et al. of polyquaternary amine. However, note that Vieira et al. is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely the use of light stabilizers to impart lightfastness to inks, and in combination with the primary reference, discloses the presently claimed invention.

Thus, given that Vieira et al. is drawn to ink jet inks as is Gundlach et al., given that Vieira et al. disclose quaternary ammonium substituted UV absorbing compound identical to that presently claimed, and given that Vieira et al. disclose that such quaternary ammonium substituted UV absorbing compound is particularly suitable for use in ink jet inks, it is the examiner's position that there is good motivation to combine Gundlach et al. with Vieira et al.

WO 97/20000 disclose the use of colorant stabilizer for ink jet inks that is identical to quaternary ammonium substituted UV absorbing compound presently claimed. WO 97/20000

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further discloses that such stabilizer is used to prevent ink from fading when exposed to light and that such stabilizer is particularly effective in ink jet inks (col.8, lines 3-4).

It is agreed that there is no disclosure in WO 97/20000 of polyquaternary amine.

However, note that WO 97/20000 is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely the use of stabilizer to prevent ink from fading, and in combination with the primary reference, discloses the presently claimed invention.

Thus, given that WO 97/20000 is drawn to ink jet inks as is Gundlach et al., given that WO 97/20000 disclose quaternary ammonium substituted UV absorbing compound identical to that presently claimed, and given that WO 97/20000 disclose that such quaternary ammonium substituted UV absorbing compound is particularly effective in ink jet inks, it is the examiner's position that there is good motivation to combine Gundlach et al. with WO 97/20000.

As evidence to support applicants' position that there is no motivation to combine Gundlach et al. with either Vieira et al. or WO 97/20000, applicants point to page 35, lines 10-17 of the present specification which states that the presently claimed quaternary ammonium substituted UV absorbing compound would not be effective in ink that does not contain polyquaternary amine compound given that the quaternary ammonium substituted UV absorbing compound would precipitate the anionic dye present in the ink.

However, Vieira et al. and WO 97/20000 are not used for their teaching of polyquaternary amine. This already taught by Gundlach et al. Further, while there is no disclosure of polyquaternary amine compound in Vieira et al. or WO 97/20000, it is significant to note that each reference still discloses that the use of quaternary ammonium substituted UV absorbing compound is particularly suitable or effective in ink jet inks including those comprising anionic dye as disclosed by Vieira et al. Thus, it is the examiner's position that there is good motivation to combine Gundlach et al. with either Vieira et al. or WO 97/20000.

While Vieira et al. do disclose that the anionic dye and the quaternary ammonium substituted UV absorbing compound form a sparingly soluble salt, the fact remains that Vieira et al. teach that that the quaternary ammonium substituted UV absorbing compound functions effectively as a light stabilizer in such ink jet inks and thus, one of ordinary skill in the art would expect the quaternary ammonium substituted UV absorbing compound to function as such in the ink jet ink of Gundlach et al.

With respect to argument (b), in response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Given that either Vieira et al. or WO

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97/20000 disclose motivation for using quaternary ammonium substituted UV absorbing compound as well as disclosing that the use of such compound is particularly suitable or effective in ink jet inks, it is the examiner's position that the combination of Gundlach et al. with either Vieira et al. or WO 97/20000 is not based on hindsight but rather based on the fact that each of Vieira et al. or WO 97/20000 teach quaternary ammonium substituted UV absorbing compound identical to that presently claimed as well as motivation for using such compound in ink jet inks such as those disclosed by Gundlach et al.

With respect to argument (c), it is noted that it is the examiner's position that the combination of Gundlach et al. with either Vieira et al. or WO 97/20000 is not based on an obvious to try standard but rather based on the fact that each of Vieira et al. and WO 97/20000 disclose that quaternary ammonium substituted UV absorbing compound identical to that presently claimed is particularly suitable or effective in imparting lightfastness to ink jet inks.

As evidence to support applicants' position that the examiner has used an obvious to try standard when combining the prior art, applicants cite *In re Geiger*, 2 USPQ2d 1976 (Fed. Cir. 1987).

In *Geiger*, the courts held that "obviousness cannot be established by combining teachings of prior art to produce claimed invention, absent some teaching, suggestion, or incentive supporting combination" and "although it might have been obvious to one skilled in the art to try various combinations of teachings of three prior art references to achieve claimed method, such evidence does not establish a prima facie case of obviousness". The facts in the



present instance, however, are different than in *Geiger* given that in the present instance, there is no need to try various combinations of prior art references to arrive at the present invention. Rather, each of Vieira et al. and WO 97/20000 explicitly disclose using such quaternary ammonium substituted UV absorbing compound as presently claimed and each explicitly disclose using such compound in ink jet ink.

Thus, unlike the situation in *Geiger*, there is no need to try various combinations of the prior art references to arrive at the present invention. Each combination, i.e. Gundlach et al. with Vieira et al. or Gundlach et al. with WO 97/20000, clearly meets the requirements of the present claims. Further, each of Vieira et al. and WO 97/20000 explicitly disclose the use of quaternary ammonium substituted UV absorbing compound in ink jet inks in order to impart lightfastness to the inks. Thus, each of Vieira et al. and WO 97/20000 have provided a teaching, suggestion and an incentive for using quaternary ammonium substituted UV absorbing compound in the ink jet ink of Gundlach et al. Thus, it is the examiner's position that the combination of Gundlach et al. with either Vieira et al. or WO 97/20000 is proper.

**Allowable Subject Matter**

7. Claims 28, 31-34, 37, and 40-43 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 28, 31-34, 37, and 40-43 would be allowable if re-written in independent form as described above given that there is no disclosure or suggestion in the "closest" prior art, i.e.

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Gundlach et al. (U.S. 6,054,505), Vieira et al (U.S. 5,096,781), or WO 97/20000, of specific quaternary ammonium substituted UV absorbing compound as required in these claims.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Callie E. Shosho  
Primary Examiner  
Art Unit 1714

CS  
2/17/04